

REMARKS

Claims 9 thru 22 are currently pending in the application. Claim 17 has been amended. Claims 20 and 22 have been canceled without prejudice. Although Applicants have canceled claims 20 and 22 herein, they respectfully reserve the right to prosecute identical or similar claims in this, or a related application. The specific grounds for rejection and Applicant's response to them are set forth in detail below.

1. Figure 1 is objected to and requires correction and a replacement sheet.

The Examiner states that "Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance."

Applicants are concurrently submitting a "Replacement Sheet" for Figure 1 with a legend referencing "Prior Art".

2. Claims 20, 22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The Examiner states that, "Claim 20 specifies that the molded and set first drawn material (e.g., the wire) forms a housing with a frangible tip, the first material is not molded and set, and there is no description of forming a housing with a frangible tip from the wire. Figure 5 shows the embodiment of claim 22 having blunt ended plungers with angle-ended channels. There is no enabling

disclosure as to how to arrange the three plungers during coating so as to obtain the object pictured in Figure 5. That is, even if the central plunger were displaced fully downward during coating, and the side arm plungers pushed down to contact the central plunger, open channels would not result because the coating would fill the gaps between the blunt ends of the side arm plungers and the cylindrical wall of the central plunger. How are open channels obtained? Where is this disclosed?"

Claims 20 and 22 have been canceled without prejudice and, consequently, the basis for the above rejection is obviated.

3. Claims 9-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner states that, "Throughout the claims, "positive displacement type substance sampling device" is unclear because it is directed to intended use. The instant device can be used as either a positive displacement pipet (when the plunger travels from the end of the barrel to aspirate and to the end of the barrel to dispense) or an air displacement device (when the plunger is spaced from the end of the barrel during aspiration and dispensing).".

Applicant respectfully requests clarification with regard to this basis for rejection. The claimed positive displacement type substance sampling and dispensing device is a specific sub-group of the group of substance sampling and dispensing devices. It is a device type. The device of the present invention is clearly a positive displacement device wherein the volume to be aspirated and dispensed is dictated by the mechanical movement of a piston inside a barrel. The fact that this device is not being claimed as an air-displacement device appears irrelevant. Please advise.

4. Claims 9-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Hughes 3,882,665.

The Examiner states that, "Hughes teaches coating wire with plastic in an extrusion method, including a step of cooling the wire during the coating process (col 7, lines 63-67). The wires are joined together in a strip 23 with apertures (sprockets) 24 (Figure 3). With respect to claim 22, plural plungers 19 on different axes inside different regions of second molded material 21 having a common core where walls 21 abut are adjacent to apertures 24. Note that the instant method claims read on coating a wire and that no additional steps of preparing the device for use as a pipet, or steps directed to using the device as a pipet are claimed."

Applicant's respectfully disagree. Hughes fails to disclose a method of making a positive displacement type substance sampling and dispensing device, as claimed. The wires of this document cannot be considered to be a plunger because the polyvinylidene fluoride bonds very securely to the thin film of the second primer which is fused to the wire (column 7, line 67 to column 8, line 5). Therefore, the outer coating is bonded securely to the inner wires and cannot move relative thereto. Hence the wires are not a plunger and the method steps of this document cannot provide a positive displacement type substance sampling and dispensing device.

5. Claims 9-12, 14, 16-17, 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Franke US4084730.

The Examiner states that, "Franke teaches making a positive displacement pipet by coating a plastic material around a wire (col. 3, lines 59-64, Figures 1-2). It is the examiner's position that the spray coating method inherently includes molding and setting, that "wire" as commonly used means a thinly drawn metal, and that the plastic and metal inherently have the properties of claim 14, specifically, metal inherently has a higher thermal conductivity and/or heat capacity than plastic."

Applicant respectfully disagrees. This document discloses the production of a plunger by plastic coating a wire to increase its diameter and also to make it compliant. This method does not make a positive displacement type substance sampling and dispensing device as claimed.

As to claim 17 as amended, this document fails to disclose or to teach a positive displacement type substance sampling and dispensing device as now claimed. For example, there is no barrel

formed from a second material by moulding and setting the second material around the central plunger. There is no disclosure that the barrel inner core and the plunger outer surface are uniform cylinders, or that the barrel inner core corresponds to the plunger outer surface along its entire length.

6. Alternatively, claims 9-12, 14-17, 21 rejected under 35 U.S.C. 103(a) as being unpatentable over Franke US4084730.

The Examiner states that, "The teachings of Franke are given above. Franke fails to explicitly teach that the plastic is set or that the wire is metal. It would have been obvious to set the plastic in order to produce its known properties at ambient conditions and to make the wire of metal in order to make a wire of known materials within the common meaning of the word "wire". With respect to claim 15, it would have been obvious to use alternative known coating methods, such as dip coating in place of spray coating for its known coating function."

As mentioned above with regard to the anticipation rejection based on the Franke patent, This document discloses the production of a plunger by plastic coating a wire to increase its diameter and also to make it compliant. This method does not make a positive displacement type substance sampling and dispensing device as claimed. As such, the use of plastic or alternative known coating methods cannot serve as a basis for rejection due to obviousness.

7. Claims 17, 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Pecsar US3877310.

The Examiner states that, "Pecsar teaches bore 93, plunger 92 coupled to bore 466 and plunger 434 (Figs. 5 and 9, col. 13, lines 30-40). Note that the method of making is not seen as defining over the prior art structure, and there are no structural limitations in claim 17."

Applicant respectfully disagrees. A review of column 6, lines 36 to 53 and especially lines 50 to 51 makes it clear that this document fails to disclose or to teach the formation of a barrel by moulding and setting of a second material around a central plunger which is formed from a first drawn material. Moreover, this document fails to disclose or to suggest that the barrel inner core and the plunger outer surface are uniform cylinders (in fact, the barrel of this document is graduated). Finally, there is no disclosure or teaching in this document that the barrel inner core corresponds to the plunger outer surface along its entire length. Again, the barrel of this document is graduated.

8. Claims 17, 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Devaney US4121739.

The Examiner states that, "Devaney teaches bores 54, 56, pistons 12, core 42 and aperture 58. Note that the method of making is not seen as defining over the prior art structure, and there are no structural limitations in claim 17."

Applicant respectfully disagrees. A review of Figure 5 and the associated description makes it abundantly clear that this document fails to disclose a central plunger of a first drawn material (the plunger has an x-shaped cross section), that the barrel is formed by moulding and setting a second material around the central plunger, that the barrel inner core and the plunger outer surface are uniform cylinders, and that the barrel inner core corresponds to the plunger outer surface along its entire length.

9. Claims 17-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Suovaniemi US4215092.

The Examiner states that, "Suovaniemi teaches molded plastic barrels 18a attached to strip 17a with sprockets 26a. Note that the apparatus claim 17 does not recite any structure and does not require that the central plunger still be present after the second material is molded. The material is structurally capable of having the tips broken by appropriate force or melted at appropriate temperature."

Applicant respectfully disagrees. This document fails to disclose or to teach the limitations of claim 17 as amended. Firstly, this document does not disclose a positive displacement type substance sampling and dispensing device. Rather, the extracts of text referred to by the Examiner relate to a strip of tip container elements. As a result, the apparatus relied upon by the Examiner fails to include a central plunger of a first drawn material. There is also no disclosure or teaching that the barrel is formed by moulding and setting a second material around the central plunger. In fact, the tips are formed by injection moulding (see column 5, lines 34 to 36). Moreover, this document does not disclose that the barrel inner core and the plunger outer surface are uniform cylinders (they are not) or that the barrel inner core corresponds to the plunger outer surface along its entire length (it does not).

10. Claims 17-18, 20-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Brophy US006103198A .

The Examiner states that, "Brophy teaches molded plastic barrels 34 attached to strip 46. Note that the apparatus claim 17 does not recite any structure and does not require that the central plunger still be present after the second material is molded. The material is structurally capable of having the tips 36, 52 broken by appropriate force or melted at appropriate temperature."

Applicant respectfully disagrees. As with the Suovaniemi reference above, the apparatus relied upon by the Examiner fails to include a central plunger of a first drawn material. There is also no disclosure or teaching that the barrel is formed by moulding and setting a second material around the central plunger. In fact, the tips are formed by injection moulding. Moreover, this document does not disclose that the barrel inner core and the plunger outer surface are uniform cylinders (they are not) or that the barrel inner core corresponds to the plunger outer surface along its entire length (it does not).

Applicants request the entry of the changes to the claims requested above. No new matter has been added by the amendments to the claims. Applicants submit that the present

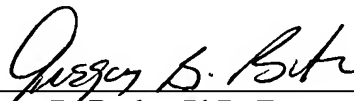
application and claims, as amended, is in condition for allowance, and, accordingly, early consideration and allowance of the application is respectfully requested.

If for any reason an additional fee is required, a fee paid is inadequate or credit is owed for any excess fee paid, you are hereby authorized and requested to charge Deposit Account No. **04-1105**.

If the undersigned can be of any assistance in advancing the prosecution of this case, the Examiner is invited to contact him through the information given below.

Respectfully submitted,

Date: October 26, 2005

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